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Screening Residential Tracts for Agricultural Activity

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ABSTRACT

The National Agricultural Statistics Service screened residential tracts in the area frame sample using subsampling procedures in 1986 and 1987. In 1986, tracts with more than 10 residences were re-screened 3 months after the June Enumerative Survey (JES). In 1987, tracts with 2 or more residences were screened during the JES. Subsampling resulted in farm number estimates which were more unbiased than the operational JES estimates and exceeded the JES estimates by 5.4 and 6.3 percent in 1986 and 1987, respectively. Subsampling may not be the ideal screening procedure for NASS, but efforts should continue to replace the operational "skip technique."

KEY WORDS: area frame sampling, household survey, residential screening

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SUMMARY

The National Agricultural Statistics Service (NASS) screens densely populated residential tracts of the area sampling frame to locate Resident Farm Operators (RFO's). Screening ensures that the tracts are surveyed completely for agricultural activity.

In 1986 and 1987, the National Agricultural Statistics Service screened residential tracts in the area sampling frame more intensely than in previous years. The impetus for the enhanced screening was the Census Bureau's need for an area-based estimate of farm numbers to adjust for list frame incompleteness during the 1987 Census of Agriculture.

In 1986, the process was a re-screening and subsampling of tracts with more than 10 residences done 3 months after the June Enumerative Survey (JES). The number of RFO's found through re-screening was significantly greater than zero. The two surveys (JES plus re-screening) resulted in a farm number estimate which was 5.4 percent greater than the operational JES indication at the national level. The mean square error (MSE) from the JES was approximately 8 times larger than the MSE from the combined surveys, due to the bias in the JES estimate.

In 1987, the screening was incorporated into the JES and done in tracts with 2 or more residences. Census Bureau screening techniques required the tabulation of all residences in a tract and the selection of a subsample of residences to contact. Enumerators conducted interviews at the selected residences and also asked the respondents if any farm operators lived in the neighborhood. The number of farm operators was expanded by the segment expansion factor and transmitted to the Census Bureau.

An alternative farm number indication was produced using the additional level of expansion based on the subsampling rate within a tract but ignoring any referrals within the neighborhood. The alternative estimates were greater than or equal to the JES estimates in all states and 6.3 percent greater nationally. A nonparametric comparison of the two indications was significant at the 1 percent level.

The analysis in this report showed that subsampling and within-tract expansion were superior to the "skip technique" in a statistical sense. Unfortunately, although subsampling is more defensible statistically than the "skip technique," it will not be used in the 1988 JES due to its cost. Even though subsample screening has been viewed as a nonviable solution to NASS's screening problems, efforts should continue to replace the "skip technique."

SCREENING RESIDENTIAL TRACTS FOR AGRICULTURAL ACTIVITY

By Ralph V. Matthews[1]

INTRODUCTION

The National Agricultural Statistics Service (NASS) screens densely populated residential tracts in the area sampling frame to find Resident Farm Operators (RFO's). Screening ensures that the tracts are surveyed completely for agricultural activity.

NASS screens with the "skip technique," in which enumerators contact at least 1 out of every 10 residences in the built up tracts to inquire about farm operator status [3][2]. Enumerators also ask if the respondent knows any other residents of the tract who operate a farm. An interview is conducted with all potential RFO's. If the operation has a potential of at least $1,000 of annual sales, the respondent is an RFO. The residence and operated land in the segment constitute an agricultural tract, and the number of RFO's is expanded to estimate number of farms.

In preparation for the 1987 Census of Agriculture, the Bureau of the Census asked for verification that NASS's screening procedures did not miss substantial numbers of RFO's. The question arose because the Bureau's techniques for locating respondents are more defensible statistically than those of NASS. In Census Bureau screening, a map or list of the residences is prepared, and a subsample of residences is selected with the sampling rate based on the total number of residences in the tract. The Bureau wanted NASS's area-based estimate of farms to adjust for the incompleteness of its list frame.

The intensive screening also allowed NASS to compare the operational RFO totals versus RFO totals based strictly on subsampling. This report describes the comparison and the results of the 1987 screening.

1986 RESIDENTIAL SCREENING

In September 1986, all tracts from the 1986 June Enumerative Survey (JES) with more than 10 residences were screened by NASS enumerators using subsampling procedures. Instructions were provided to enumerators in an Interviewer's Manual [4]. The purpose was to learn if RFO's were missed by the screening in the 1986 JES. This was a pilot test of the enhanced screening methods before their operational use during the 1987 JES.

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2 Bracketed numbers cite references at the end of this report.

The total number of RFO's was estimated by two components: the JES estimate and the re-screening estimate.

$$Y_{total} = Y_{jes} + Y_{re\text{-}screen} .$$

Both Y_{jes} and $Y_{re\text{-}screen}$ were calculated by summing the expanded segment totals over all strata. The re-screening estimate included the within-tract expansion based on the subsampling rate.

The standard error of the total was the square root of the following variance:

$$\begin{aligned} Var[Y_{total}] &= Var[Y_{jes} + Y_{re\text{-}screen}] \\ &= Var[Y_{jes}] + Var[Y_{re\text{-}screen}] \\ &\quad + 2\, Cov[Y_{jes}, Y_{re\text{-}screen}] . \end{aligned}$$

The covariance was calculated between the expanded segment totals for each estimate within each substratum. The two surveys did not produce independent estimates of farms, since the tracts to re-screen were identified from the results of the JES.

Table 1 contains the farm number estimates from the 1986 JES, the September 1986 re-screening, and the combination of the two surveys. The number of additional farms estimated by re-screening was 5.4 percent of the total JES estimate. Moreover, it was 4 times greater than its estimated standard error, indicating that the number of RFO's found by re-screening was significantly greater than zero.

The state-level correlation coefficients between the number of RFO's found by the JES and by the re-screening are also shown in table 1. The correlation was positive if both surveys found RFO's in the same segment. The correlation was negative if only one survey found RFO's in a segment and only the other survey found RFO's in a different segment. The correlation was zero if one survey found RFO's in a segment and the other survey found none.

Correlations could not be computed for the 20 states which had no standard error of the re-screening estimate. In the remaining 28 states, 9 correlations were negative and 6 correlations exceeded .1 and were positive. Overall, the correlation results indicated a poor relationship between the surveys in their abilities to locate RFO's.

Table 1 -- Farm number estimates and standard errors from the 1986 JES, the September re-screening, and a combination of the two surveys

State	JES Est.	JES S.E.	Re-screen Est.	Re-screen S.E.	JES & Re-screen correlation	Total Est.	Total S.E.
ALA	52,424	3,683	653	651	.00	53,076	3,740
ARIZ	7,265	1,602	31	29	.03	7,296	1,603
ARK	40,754	3,314	0	---	---	40,754	3,314
CALIF	70,288	5,527	871	525	-.01	71,159	5,543
COLO	26,437	2,785	0	---	---	26,437	2,785
CONN	4,024	1,037	0	---	---	4,024	1,037
DEL	2,797	346	0	---	---	2,797	346
FLA	26,799	2,402	2,037	2,033	.07	28,836	3,247
GA	45,641	3,076	640	638	.09	46,282	3,198
IDAHO	23,539	2,680	0	---	---	23,539	2,680
ILL	77,280	4,306	0	---	---	77,280	4,306
IND	66,366	3,982	16,120	16,113	.29	82,486	17,679
IOWA	108,237	4,740	4,392	4,387	-.11	112,629	6,090
KANS	64,767	6,672	0	---	---	64,767	6,672
KY	84,684	4,340	2,202	1,322	.18	86,886	4,758
LA	26,776	2,686	1,804	1,063	-.08	28,580	2,804
MAINE	7,941	1,124	0	---	---	7,941	1,124
MD	11,976	743	1,200	938	.14	13,177	1,276
MASS	5,265	779	0	---	---	5,265	779
MICH	59,389	3,779	6,121	3,860	.01	65,510	5,441
MINN	81,781	4,134	3,117	2,414	.01	84,898	4,798
MISS	41,786	2,807	3,211	2,265	-.01	44,997	3,585
MO	110,733	6,392	3,986	3,982	-.02	114,719	7,463
MONT	24,270	4,649	2,584	2,128	.76	26,854	6,424
NEBR	53,877	3,450	1,000	999	.21	54,878	3,786
NEV	1,418	304	0	---	---	1,418	304
N H	3,214	687	0	---	---	3,214	687
N J	7,629	745	0	---	---	7,629	745
N MEX	9,273	1,280	0	---	---	9,273	1,280
N Y	40,803	2,803	1,613	1,310	.09	42,416	3,203
N C	60,660	4,368	1,904	1,345	.01	62,564	4,580
N DAK	31,246	2,357	0	---	---	31.246	2,357
OHIO	84,525	5,278	888	885	.03	85,412	5,378
OKLA	61,474	4,811	0	---	---	61,474	4,811
OREG	39,699	3,595	1,617	1,281	-.08	41,316	3,722
PA	57,438	3,240	683	679	.03	58,121	3,333
R I	252	70	0	---	---	252	70
S C	28,278	2,434	0	---	---	28,278	2,434
S DAK	32,318	2,319	6,761	4,859	-.23	39,079	4,886
TENN	98,203	6,083	2,933	2,094	-.01	101,136	6,413
TEX	135,789	9,838	35,920	18,819	.18	171,709	22,787
UTAH	8,901	1,069	752	578	.09	9,652	1,256
VT	6,298	736	0	---	---	6,298	736
VA	48,063	3,604	2,166	1,578	≈.00	50,229	3,938
WASH	35,631	3,385	1,319	1,099	-.19	36,950	3,355
W VA	23,197	1,816	1,497	1,034	≈.00	24,695	2,089
WIS	72,482	3,384	0	---	---	72,482	3,384
WYO	6,065	689	25	---	---	6,090	689
U S	2,017,952	25,071	108,047	26,995	.08	2,126,003	38,348

In order to compare the accuracy of the two surveys, the mean square error (MSE) was calculated for each. Since the total estimate was assumed unbiased, its MSE equaled its variance. The MSE for the JES estimate had two parts: its variance and its squared bias.

The total number of RFO's was estimated by the JES estimate plus the re-screening estimate:

$$Y_{total} = Y_{jes} + Y_{re\text{-}screen}$$

$$\text{or} \quad t = j + r \quad .$$

By definition, the variance of r is

$$VAR(r) = E\left[r^2 \right] - R^2$$

where E is the expectation operator and R is the parameter value. This leads to the equality

$$R^2 = E\left[r^2 \right] - VAR(r) \quad ,$$

which will be used below. The bias in j is equal to R. Thus, the Mean Square Error of the JES estimate is

$$MSE(j) = VAR(j) + \left[\text{Bias in } j \right]^2$$

$$= VAR(j) + R^2$$

$$= VAR(j) + E\left[r^2 \right] - VAR(r) \quad .$$

This last value can be estimated in an unbiased fashion by

$$\hat{MSE}(j) = \hat{VAR}(j) + r^2 - \hat{VAR}(r) \quad .$$

The ratio of the JES MSE to the total MSE at the national level was 7.87, indicating much less accuracy from the JES estimate than from the total estimate. Approximately 95 percent of the JES MSE was due to the squared bias term.

The state estimates told a different story. Compared with the total MSE, the JES MSE was greater in 8 states, less in 16 states, and approximately equal in 4 states. This suggested that the re-screening process as conducted in 1986 was too unstable to produce viable estimates at the state level. Nevertheless, the JES estimate had a very large bias at the national level. The phenomenon of variance dominating bias in small samples and bias dominating variance in large, aggregated samples is not uncommon.

1987 RESIDENTIAL SCREENING

The 1986 results showed that RFO's were missed in the screening for the JES. The screening methods used in September 1986 were made operational in the 1987 JES with the following modifications:

1. Tracts with 2 or more residences were screened.

2. Vacant residences, inaccessibles, and refusals were replaced by substituting other residences.

3. Each respondent was asked if anyone in the neighborhood operated a farm, operated a ranch, or stored grain. Potential RFO's found with this question were known as referrals.

4. In non-agricultural strata, 308 segments that would normally have rotated out of the area frame sample were not rotated out. This resulted in a one-time larger sample size, because new segments were rotated into the sample as usual.

The objective of the subsampling was to provide improved farm number estimates to the Census Bureau. The residences to contact were identified through subsampling, and potential RFO's were interviewed to verify their status. RFO's found with the neighborhood referral question were included in this estimate. The tract totals were summarized in the usual way, having no within-tract expansion. This JES indication of farm numbers was reported to the Census Bureau.

Since counts were available for residences per tract and residences sampled per tract, a within-tract expansion factor was calculated to produce an alternative farm number estimate. In tracts with RFO's, these expanded tract totals replaced the tract totals in the JES data before re-summarization. RFO's found with the neighborhood referral question were not included in this estimate, since the subsampled residences represented all residences in the tract. This was an additional indication considered by the Agricultural Statistics Board of NASS when the farm number estimates were set in July 1987.

Instructions and examples were provided to enumerators in a supplement to the JES Interviewers Manual [5]. Tables in appendix 1 show the state totals of tracts screened and residences contacted. The forms used for the residential screening are shown in appendix 2.

Table 2 shows the unexpanded numbers of RFO's and expanded numbers of farms found by the residential screening. For example, the 5 RFO's in Iowa expanded to 9,547 farms at the state level. Only those RFO's found by initial contact or substitution are included; referrals within the neighborhood are not included.

In Florida, New Jersey, Texas, and West Virginia, 10 or more RFO's were found. In Florida's sample, 20 segments (4.7 percent) were not rotated out in 1987. This was the largest sample size change in absolute number and in percentage of the sample. The New Jersey frame was new in 1987, and the residential tracts may have been screened more thoroughly in the first year of use.

Table 2 -- Resident farm operators found through subsampling; referrals within the neighborhood excluded; 1987 JES residential tract screening

State	RFO's (unexpanded)	Farms (expanded)	Percentage of JES direct expansion
ALA	1	712	1.5
ARIZ	0	0	0.0
ARK	1	1,219	3.1
CALIF	4	1,903	2.9
COLO	0	0	0.0
CONN	1	132	4.9
DEL	1	71	2.3
FLA	11	5,683	19.9
GA	0	0	0.0
IDAHO	0	0	0.0
ILL	3	3,829	5.2
IND	2	12,930	20.9
IOWA	5	9,547	9.3
KANS	5	5,641	8.7
KY	5	2,255	2.5
LA	2	955	3.4
MAINE	0	0	0.0
MD	2	355	2.9
MASS	0	0	0.0
MICH	0	0	0.0
MINN	0	0	0.0
MISS	3	1,980	4.8
MO	3	3,990	3.6
MONT	3	2,156	9.0
NEBR	0	0	0.0
NEV	1	2,723	103.9
N H	2	2,318	65.8
N J	26	2,717	40.5
N MEX	3	349	3.9
N Y	4	3,883	10.1
N C	3	1,935	3.0
N DAK	0	0	0.0
OHIO	3	1,849	2.4
OKLA	2	1,740	2.9
OREG	3	1,283	3.3
PA	1	265	.4
R I	0	0	0.0
S C	3	971	3.8
S DAK	1	2,737	9.4
TENN	3	6,096	6.3
TEX	21	41,190	23.6
UTAH	4	287	3.2
VT	2	763	10.6
VA	0	0	0.0
WASH	0	0	0.0
W VA	10	2,169	9.9
WIS	0	0	0.0
WYO	7	903	15.1
U S	151	127,536	6.3

Table 3 contains two sets of farm number estimates based on the 1987 JES. One set is from the operational JES summary; the second set includes the expansion based on the subsampling within each tract. Overall, a 6.3 percent increase resulted from expanding subsampled RFO's. The two national estimates in table 3 and a multiple-frame estimate were considered by the ASB in setting the national farm number estimate at 2,173,410 farms [6].

The subsample expansion estimate exceeded the JES estimate, unless the number of RFO's found with the neighborhood referral question equaled the expanded number of RFO's using the within-tract expansion factor. The number of potential RFO referrals was 103, and 7 were confirmed as RFO's. The small number of referrals ensured that the tract expansion estimate exceeded the JES estimate if RFO's were found.

The JES and the tract expansion estimates were compared to determine if the JES estimates were biased downward in a significant number of states. Substituting for vacant residences may have caused a slight bias, but it was believed to be ignorable. In 34 of 48 states, the JES estimate was less; in 14 states, the estimates were equal. A conservative sign test indicated that the probability of 34 out of 48 tract expansion estimates exceeding the JES estimate, when one estimator was not expected to produce larger numbers than the other, was less than 1 percent. The downward bias in the JES estimates resulted from the failure of the neighborhood referral question to find enough RFO's to balance the within-tract expansion factors.

Table 3 -- Farm number estimates and standard errors from the 1987 JES and the 1987 JES with residential screening tract expansion

State	JES		JES with tract expansion	
	Est.	S.E.	Est.	S.E.
ALA	46,356	3,457	47,068	3,595
ARIZ	7,000	1,330	7,000	1,323
ARK	39,265	3,114	40,084	3,406
CALIF	65,251	4,818	67,154	4,996
COLO	27,063	2,954	27,063	2,952
CONN	2,672	651	2,804	667
DEL	3,093	393	3,164	420
FLA	28,533	2,421	34,216	4,297
GA	42,724	3,047	42,724	3,047
IDAHO	20,833	2,102	20,833	2,102
ILL	73,602	4,099	77,431	4,960
IND	61,911	3,716	74,841	13,907
IOWA	102,890	5,528	112,437	7,076
KANS	65,172	5,765	70,813	6,703
KY	88,800	4,346	91,055	4,671
LA	27,800	2,838	28,755	3,019
MAINE	7,673	1,054	7,673	1,054
MD	12,428	718	12,783	778
MASS	4,926	913	4,926	913
MICH	56,802	3,558	56,802	3,558
MINN	83,357	4,060	83,357	4,060
MISS	40,886	2,668	42,866	3,029
MO	110,479	6,583	114,469	7,248
MONT	23,894	3,785	26,050	4,272
NEBR	51,294	3,390	51,294	3,390
NEV	2,620	789	5,343	2,983
N H	3,523	601	5,841	2,207
N J	6,707	497	9,424	1,189
N MEX	8,949	1,302	9,298	1,362
N Y	38,592	2,589	42,475	3,771
N C	64,423	4,748	66,358	5,078
N DAK	30,836	2,215	30,836	2,215
OHIO	76,298	4,760	78,147	5,000
OKLA	60,081	3,991	61,821	4,267
OREG	38,366	3,401	39,649	3,488
PA	59,243	3,240	59,508	3,259
R I	865	457	865	457
S C	25,295	2,164	26,266	2,333
S DAK	29,268	2,180	32,005	3,496
TENN	96,814	5,676	102,910	7,189
TEX	174,332	10,390	215,522	18,379
UTAH	9,014	970	9,301	990
VT	7,195	896	7,958	1,083
VA	49,374	3,682	49,374	3,682
WASH	33,790	3,271	33,790	3,271
W VA	21,910	1,559	24,079	2,188
WIS	72,677	3,344	72,677	3,344
WYO	5,987	838	6,890	1,005
U S	2,010,863	24,343	2,138,399	33,741

Table 4 contains a frequency distribution for the income of the RFO's found through subsampling. A few RFO's had high values of sales, but 80 percent of all those found had sales of less than $10,000.

Table 4 -- Value of sales for resident farm operators found through subsampling, referrals within the neighborhood excluded; 1987 JES residential tract screening

Dollar value of sales	Frequency
1,000 - 2,499	76
2,500 - 4,999	31
5,000 - 9,999	14
10,000 - 19,999	7
20,000 - 39,999	5
40,000 - 99,999	10
100,000 - 249,999	4
250,000 - 499,999	1
500,000 +	3
TOTAL	151

Table 5 contains estimates of the number of residences in all tracts and estimates of the number of residences in the subsampled tracts (2 or more residences). At the national level, 89 percent of the residences in all sample tracts were in the tracts screened.

The Census Bureau report "Housing Vacancies, Second Quarter 1987" [1] contains estimates of total residences which can be compared with the NASS estimate of 85.6 million residences. The Census Bureau estimate of all housing units was 101.6 million, and the estimate of occupied housing units was 90.2 million. Individual state estimates were not published. The NASS screening procedure was to count all housing units, including vacant ones. Thus, the NASS estimate was 15.7 percent below the Census Bureau estimate.

Table 5 -- Estimates of number of residences using all tracts and only subsampled tracts; 1987 JES residential tract screening

State	Residences in all tracts (expanded)	CV %	Residences in subsampled tracts (expanded)	CV %
ALA	1,316,219	12.3	1,042,590	15.6
ARIZ	1,440,669	17.0	1,394,618	17.6
ARK	772,981	10.0	606,619	12.7
CALIF	10,089,908	14.1	9,407,168	14.9
COLO	1,025,704	12.8	962,227	13.7
CONN	1,214,387	17.3	1,209,511	17.4
DEL	201,332	15.9	184,622	17.5
FLA	6,151,291	19.5	6,074,311	19.7
GA	1,888,826	8.6	1,677,653	9.6
IDAHO	346,133	31.6	309,386	35.1
ILL	3,237,170	19.0	2,742,025	18.9
IND	2,470,107	17.0	2,179,903	19.3
IOWA	1,693,100	17.0	1,473,799	19.8
KANS	812,445	12.0	673,639	14.2
KY	1,251,699	10.6	948,162	13.9
LA	1,225,852	14.9	1,087,569	16.7
MAINE	528,535	24.3	508,217	25.3
MD	1,627,847	10.2	1,528,549	10.7
MASS	1,351,118	19.8	1,301,290	20.7
MICH	2,970,474	12.6	2,698,787	13.9
MINN	4,011,124	52.8	3,779,406	56.0 [1]
MISS	786,313	10.3	530,095	15.0
MO	2,009,448	12.1	1,694,633	13.9
MONT	338,359	12.1	289,169	13.4
NEBR	456,355	13.1	348,908	17.0
NEV	258,648	33.2	249,658	34.4
N H	233,582	21.4	221,955	22.5
N J	2,148,192	13.1	1,928,079	14.5
N MEX	442,097	13.2	421,910	13.8
N Y	5,451,480	19.5	5,133,017	20.7
N C	2,239,268	9.8	1,815,238	12.1
N DAK	276,978	31.9	225,648	38.9
OHIO	2,890,479	15.5	2,548,271	17.6
OKLA	984,464	14.9	820,583	17.5
OREG	888,455	21.3	733,548	26.0
PA	3,368,928	12.7	3,194,351	13.4
R I	146,974	20.3	143,712	21.8
S C	1,091,933	8.8	937,583	10.2
S DAK	315,939	38.7	269,709	45.4
TENN	1,743,276	9.5	1,342,294	12.3
TEX	6,135,433	13.2	5,214,078	15.5
UTAH	378,718	29.4	341,365	31.8
VT	143,689	12.2	128,454	13.5
VA	1,983,245	11.6	1,657,665	13.8
WASH	2,381,597	34.5	2,159,449	38.1
W VA	824,030	9.9	747,900	10.8
WIS	1,943,831	15.1	1,599,755	18.3
WYO	156,204	13.7	141,655	15.0
U S	85,644,835	4.1	76,628,733	4.6

[1] One segment, divided in 4 equal parts after the 1986 JES, accounted for 59.2 percent of the residences in subsampled tracts.

CONCLUSIONS AND RECOMMENDATIONS

In 1986, re-screening after the JES resulted in an RFO estimate which was 5.4 percent greater than the JES estimate. The RFO estimate from re-screening was significantly greater than zero when compared with its standard error. The MSE of the national JES estimate was approximately 8 times greater than the MSE for the combined estimate.

In 1987, the screening process was incorporated into the JES, but separate RFO estimates were calculated with and without the within-tract expansion. The subsample screening resulted in an estimate which was 6.3 percent greater than the JES estimate.

In 34 of 48 states, the operational JES estimates were less than those incorporating the within-tract subsampling rates, due to the failure of the neighborhood referral question to locate many RFO's. This highly significant result confirmed a downward bias in the operational JES estimate.

NASS's two-year experiment with enhanced residential screening ended after the 1987 JES. The Census Bureau's data needs for the 1987 Census of Agriculture were met, and the high cost of enhanced screening could not be justified on an ongoing basis. The "skip technique" used prior to 1987 will be used in the 1988 JES [2]. The number of urban segments will return to levels comparable to 1986, as the urban segments which were kept in for the 1987 JES will be dropped [7].

The successful use of subsample screening has implications for future JES surveys. Data from JES surveys in the two years showed subsampling to be preferable statistically to the "skip technique." High costs prevented the adoption of subsampling as an operational procedure, but the "skip technique" was shown to be inferior. Efforts should continue to find a replacement procedure.

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APPENDIX 1
Description of subsampling procedure,
1987 JES residential screening

In 1987, to sample the residences in a tract, all residences were listed, and a random start was selected. The sampling intervals in table A1 were followed after the random start.

Table A1 -- Sampling rates of residences per tract; 1987 JES residential tract screening

Residences in tract	Sampling rate
1 - 3	all
4 - 25	every 4th
26 - 50	every 8th
51 - 100	every 15th
> 100	every 25th

Table A2 contains the total number of sampled tracts in each state, the number of non-agricultural tracts with only one residence, and the residential tracts which were screened. The one-residence tracts were not meant to be screened, but 56 actually were screened. Approximately one-third of all sampled tracts (42,918 of 128,028) were non-agricultural tracts.

At the national level, 8.6 percent of all sampled tracts were screened. Table A2 shows that 38,028 of the 315,712 residences in the screened tracts were to be contacted -- a 12.0 percent sample. This is slightly above the 10 percent sample which was the goal of the earlier NASS screening methods.

Table A3 shows the frequency distribution for the number of residences in the screened tracts. For example, 3.8 percent of Alabama's 238 sampled tracts had from 1 to 3 residences in the screened tracts. Overall, the average number of residences in the screened tracts was 29. At the national level, 49 percent of all tracts had from 4 to 25 residences. This was also the modal class in 40 of the 48 states.

Table A4 shows the frequency distribution for the number of residences to contact in the screened residential tracts. For example, 61.8 percent of the tracts screened in Alabama had from 1 to 3 residences contacted. Overall, the average number of residences contacted in the screened tracts was 3.5. Enumerators rarely had to contact more than 6 residences per screened tract.

Table A5 contains an approximate accounting of the residences which were screened. "Residences to contact" are those residences identified to be contacted when the screening process began. "Non-RFO substitutes" are residences substituted for initial contacts which were then found not to be RFO's. "Neighborhood referrals" are those residences found through the question about agricultural activity by others in the neighborhood. Seven of these 102 referrals were RFO's. The "Potential contacts" column is the sum of the first three columns and reflects the potential number of contacts. "Residences contacted" may exceed "Potential contacts" due to an initial inaccurate count of residences in the tract.

Table A5 has the national totals with and without Minnesota's data. More than 600 residences were contacted in Minnesota, but the data was transmitted as only one observation per tract. Thus, the national "potential contacts" and "residences contacted" figures are misleading if Minnesota's data are included. This problem had no effect on the farm number estimate, since no RFO's were found in Minnesota through screening.

The 151 RFO's from table 2 are not identified as a distinct group in table A5. They are either included in the initial "Residences to contact" or are substitutions that do not appear in table A5 since only non-RFO substitutions were coded. True RFO's were coded the same whether they were initial contacts or substitutes, so they could not be separated.

Table A2 -- Total sampled tracts, single-residence non-agricultural tracts, residential tracts screened, residences in screened tracts, and residences to contact; 1987 JES residential tract screening

State	Total tracts	1-residence non-ag tracts	Tracts screened	Residences in screened tracts	Residences to contact
ALA	3,261	920	238	4,970	695
ARIZ	2,216	553	316	14,463	1,361
ARK	3,731	1,008	172	3,722	469
CALIF	7,768	2,153	708	28,866	2,753
COLO	2,139	359	178	6,213	670
CONN	259	21	118	5,338	533
DEL	953	320	137	4,317	511
FLA	3,230	453	440	22,255	1,699
GA	3,223	923	348	8,301	1,240
IDAHO	2,553	74	92	1,398	254
ILL	3,035	780	200	4,884	717
IND	2,933	1,066	156	4,628	598
IOWA	2,545	508	81	2,052	288
KANS	2,290	325	83	3,461	360
KY	4,387	1,456	368	4,977	997
LA	2,439	629	211	4,711	663
MAINE	782	105	175	3,249	532
MD	3,957	1,287	571	18,475	2,060
MASS	374	55	132	3,436	418
MICH	2,885	957	260	6,056	831
MINN	2,803	662	169	4,344	585
MISS	4,123	1,500	154	3,491	509
MO	2,840	610	159	5,401	622
MONT	1,212	156	94	2,937	409
NEBR	2,349	221	53	1,357	164
NEV	413	111	26	1,261	136
N H	252	69	56	1,615	194
N J	2,539	317	646	23,110	2,526
N MEX	1,566	247	177	6,434	693
N Y	4,587	1,689	506	11,433	1,520
N C	4,134	1,545	382	7,249	1,144
N DAK	1,667	125	42	1,463	147
OHIO	2,586	751	165	5,368	596
OKLA	3,242	678	172	3,648	564
OREG	3,000	870	169	3,673	528
PA	3,798	695	511	11,118	1,536
R I	153	19	72	1,769	241
S C	3,010	915	409	6,008	1,057
S DAK	1,397	122	37	1,116	149
TENN	3,986	1,549	234	6,229	745
TEX	6,838	1,119	287	10,069	1,213
UTAH	2,227	347	155	6,391	574
VT	446	79	77	1,220	206
VA	3,420	1,076	253	7,588	868
WASH	3,238	985	266	8,403	977
W VA	2,612	494	477	8,671	1,560
WIS	3,464	874	104	4,270	384
WYO	1,166	179	126	4,304	532
U S	128,028	31,956	10,962	315,712	38,028

Table A3 -- Frequency table of residences per screened tract; 1987 JES residential tract screening

State	Tracts screened	Residences in screened tracts: 1-3	4-25	26-50	51-100	> 100
		%				
ALA	238	3.8	62.2	25.6	8.0	0.4
ARIZ	316	11.4	24.4	36.7	21.5	6.0
ARK	172	19.2	50.0	19.8	9.3	1.7
CALIF	708	17.5	29.8	25.0	21.9	5.8
COLO	178	9.6	41.0	26.4	18.0	5.1
CONN	118	5.9	16.9	57.6	12.7	6.8
DEL	137	4.4	46.0	35.8	10.9	2.9
FLA	440	14.5	43.2	14.8	13.4	14.1
GA	348	21.8	45.1	18.7	12.6	1.7
IDAHO	92	40.2	43.5	12.0	1.1	3.3
ILL	200	5.0	64.5	20.5	7.5	2.5
IND	156	10.3	48.1	30.1	9.0	2.6
IOWA	81	19.8	34.6	33.3	11.1	1.2
KANS	83	2.4	21.7	47.0	26.5	2.4
KY	368	28.3	57.6	10.3	2.4	1.4
LA	211	16.1	51.2	19.4	11.8	1.4
MAINE	175	14.3	61.7	15.4	8.0	0.6
MD	571	2.1	54.3	27.3	12.8	3.5
MASS	132	6.1	62.9	18.2	7.6	5.3
MICH	260	5.8	66.2	20.0	5.0	3.1
MINN	169	14.2	42.6	29.6	12.4	1.2
MISS	154	5.2	61.0	24.0	7.8	1.9
MO	159	9.4	39.6	28.9	18.9	3.1
MONT	94	2.1	28.7	69.1	0.0	0.0
NEBR	53	20.8	56.6	11.3	5.7	5.7
NEV	26	0.0	11.5	84.6	0.0	3.8
N H	56	8.9	50.0	23.2	12.5	5.4
N J	646	11.0	43.3	34.8	7.6	3.3
N MEX	177	20.9	36.7	23.7	13.6	5.1
N Y	506	3.2	72.3	17.2	4.5	2.8
N C	382	13.1	60.5	20.9	4.2	1.3
N DAK	42	14.3	45.2	19.0	11.9	9.5
OHIO	165	6.1	63.0	16.4	7.3	7.3
OKLA	172	19.2	50.6	21.5	7.6	1.2
OREG	169	30.2	41.4	17.2	8.3	3.0
PA	511	18.8	58.1	12.9	7.0	3.1
R I	72	16.7	52.8	22.2	5.6	2.8
S C	409	43.8	37.7	12.0	5.1	1.5
S DAK	37	2.7	37.8	45.9	13.5	0.0
TENN	234	8.1	59.0	15.0	14.1	3.8
TEX	287	1.4	44.6	44.6	7.3	2.1
UTAH	155	14.2	37.4	20.0	19.4	9.0
VT	77	13.0	71.4	7.8	6.5	1.3
VA	253	4.7	57.7	22.1	11.9	3.6
WASH	266	10.5	58.3	21.8	7.5	1.9
W VA	477	16.6	52.6	27.5	3.4	0.0
WIS	104	4.8	51.9	16.3	17.3	9.6
WYO	126	7.9	26.2	50.8	14.3	0.8
U S	10,962	13.4	49.0	24.0	10.2	3.5

Table A4 -- Frequency table of residences to contact per screened tract; 1987 JES residential tract screening

State	Tracts screened	Residences to contact		
		1-3	4-6	> 6
		%		
ALA	238	61.8	37.8	0.4
ARIZ	316	35.4	58.2	6.3
ARK	172	64.5	35.5	0.0
CALIF	708	44.2	51.3	4.5
COLO	178	42.7	53.9	3.4
CONN	118	26.3	69.5	4.2
DEL	137	44.5	53.3	2.2
FLA	440	51.8	40.2	8.0
GA	348	54.0	41.1	4.9
IDAHO	92	76.1	21.7	2.2
ILL	200	41.5	57.5	1.0
IND	156	42.9	53.8	3.2
IOWA	81	50.6	49.4	0.0
KANS	83	28.9	68.7	2.4
KY	368	75.8	23.1	1.1
LA	211	60.7	38.9	0.5
MAINE	175	63.4	36.6	0.0
MD	571	49.7	47.8	2.5
MASS	132	61.4	37.1	1.5
MICH	260	58.5	39.2	2.3
MINN	169	48.5	50.9	0.6
MISS	154	55.8	42.9	1.3
MO	159	37.1	60.4	2.5
MONT	94	20.2	78.7	1.1
NEBR	53	62.3	34.0	3.8
NEV	26	11.5	80.8	7.7
N H	56	50.0	46.4	3.6
N J	646	45.8	51.2	2.9
N MEX	177	45.2	50.8	4.0
N Y	506	64.6	33.6	1.8
N C	382	64.7	34.3	1.0
N DAK	42	54.8	42.9	2.4
OHIO	165	53.9	40.6	5.5
OKLA	172	58.7	39.5	1.7
OREG	169	60.9	35.5	3.6
PA	511	66.3	31.9	1.8
R I	72	54.2	44.4	1.4
S C	409	79.2	18.8	2.0
S DAK	37	29.7	67.6	2.7
TENN	234	57.7	40.2	2.1
TEX	287	34.8	61.3	3.8
UTAH	155	54.8	40.6	4.5
VT	77	72.7	27.3	0.0
VA	253	51.0	47.4	1.6
WASH	266	57.1	41.4	1.5
W VA	477	55.3	43.6	1.0
WIS	104	51.0	44.2	4.8
WYO	126	26.2	72.2	1.6
U S	10,962	53.7	43.7	2.7

Table A5 -- Residences to contact, substitution residences, referrals within the neighborhood, total of first three columns, and residences contacted; 1987 JES residential tract screening

State	Residences to contact	Non-RFO substitutes	Neighborhood referrals	Potential contacts	Residences contacted
ALA	695	17	5	717	720
ARIZ	1,361	116	0	1,477	1,490
ARK	469	0	0	469	478
CALIF	2,753	463	0	3,216	3,209
COLO	670	79	0	749	753
CONN	533	96	0	629	638
DEL	511	35	0	546	557
FLA	1,699	305	16	2,020	2,022
GA	1,240	0	0	1,240	1,246
IDAHO	254	23	0	277	280
ILL	717	113	2	832	834
IND	598	356	0	954	955
IOWA	288	15	2	305	308
KANS	360	39	3	402	409
KY	997	56	0	1,053	1,056
LA	663	79	8	750	752
MAINE	532	84	0	616	627
MD	2,060	109	0	2,169	2,208
MASS	418	34	3	455	460
MICH	831	182	1	1,014	1,018
MINN	585	43	1	629	169 [1]
MISS	509	87	0	596	596
MO	622	13	0	635	637
MONT	409	0	0	409	433
NEBR	164	0	0	164	168
NEV	136	51	1	188	188
N H	194	17	1	212	212
N J	2,526	209	34	2,769	2,595
N MEX	693	50	0	743	782
N Y	1,520	138	1	1,659	1,685
N C	1,144	88	7	1,239	1,240
N DAK	147	22	0	169	174
OHIO	596	0	0	596	599
OKLA	564	55	0	619	632
OREG	528	44	0	572	573
PA	1,536	0	0	1,536	1,589
R I	241	0	0	241	246
S C	1,057	41	1	1,099	1,109
S DAK	149	0	0	149	149
TENN	745	33	0	778	779
TEX	1,213	120	8	1,341	1,402
UTAH	574	0	0	574	598
VT	206	26	0	232	233
VA	868	80	1	949	962
WASH	977	79	3	1,059	1,065
W VA	1,560	186	5	1,751	1,872
WIS	384	20	0	404	408
WYO	532	67	0	599	601
U S	38,028	3,670	103	41,801	41,716
w/o MN	37,443	3,627	102	41,172	41,547

[1] Substitutions, referrals, and residences contacted are based on data reported as one observation per tract

APPENDIX 2
1987 JES residential screening forms

RANDOM NUMBER TABLE 1

19	30	9	11	7	23	12	30
6	28	5	24	10	25	7	9
10	8	10	15	21	24	6	6
2	23	40	54	2	3	32	1
7	21	1	32	15	16	24	8
22	4	4	11	3	18	4	11
8	16	23	6	10	2	11	12
15	13	6	17	3	4	1	15
4	10	16	12	14	11	10	14
1	6	34	4	1	17	42	7
17	2	21	24	8	16	4	12
5	12	36	12	17	2	33	6
14	18	7	14	6	14	27	14
9	3	4	10	18	7	21	15
12	1	14	21	13	26	13	9
8	7	33	3	5	30	9	34
10	6	4	2	19	5	1	15
3	5	16	8	7	1	9	16
4	34	6	12	13	10	20	13
13	19	20	16	24	36	6	14

MAY - JUNE 1987
RESIDENTIAL TRACT SCREENING

SETUP SHEET

SINGLE OR MULTIPLE DWELLING UNITS

COUNTY _____ SEGMENT _____ TRACT _____

Use all mapping materials to locate tract. If possible, drive around the tract to determine boundaries. Complete the grid and listing sheet inside per instructions. After completing the grid and listing sheet, enter the following data:

1. TOTAL NUMBER OF DWELLING UNITS? _____

2. CHECK APPROPRIATE SIZE GROUP EQUAL TO DWELLING UNITS:

SIZE GROUP:	SAMPLING RATE
1 - 3	All _____
4 - 25	4 _____
26 - 50	8 _____
51 - 100	15 _____
100 +	25 _____

3. GO TO TABLE OF RANDOM NUMBERS AND SELECT A STARTING POINT:

4. PERFORM SAMPLING PROCEDURE CALCULATIONS BELOW:

		SAMPLE UNITS
STARTING POINT	_____	1st interview
SAMPLING RATE (INTERVAL) +	_____	
	_____	2nd interview
(interval) +	_____	
	_____	3rd interview
(interval) +	_____	
	_____	4th interview
(interval) +	_____	
	_____	5th interview
(interval) +	_____	
	_____	6th interview

5. CIRCLE SAMPLE UNITS ON THE GRID AND LISTING SHEET. THEN COPY ADDRESS TO THE QUESTIONNAIRE.

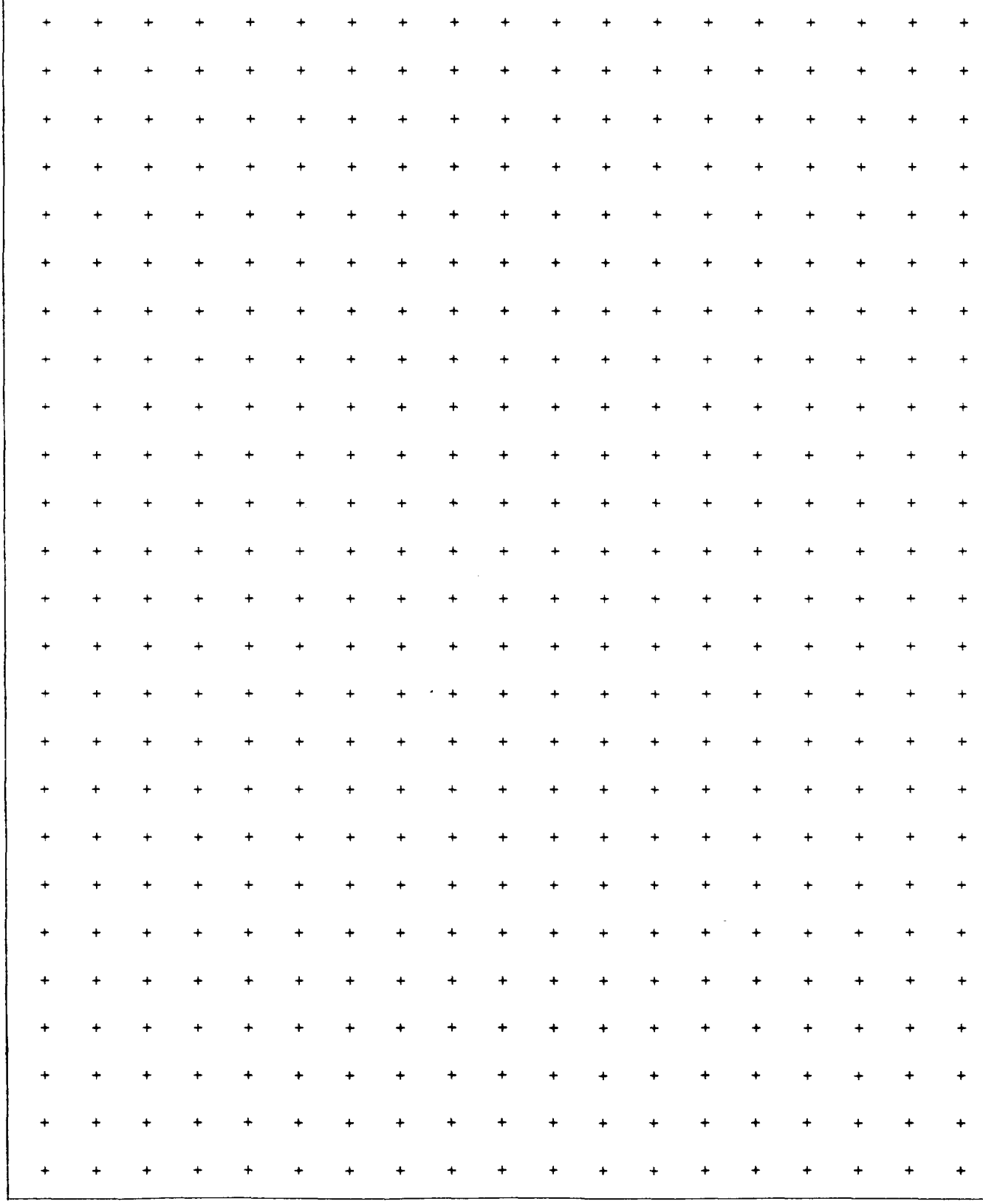
Continue as needed.

Segment _____ Tract _____ Total Dwelling Units _____

GRID (1 of _____)

Sketch tract boundaries and location of residences within the tract. Label roads and other landmarks which form tract boundaries. Identify residences by house number, if available, or in some other consistent manner. Schools, factories, etc., that may be located in the tract should also be sketched.

N



SCHEDULE A
LISTING SHEET FOR SINGLE OR MULTIPLE DWELLING UNIT

1 of _____

This tract is a
Single dwelling unit _____
Multiple dwelling unit _____
Combination of both _____

Total Dwelling Units _____

Sample Units ___; ___; ___; ___; ___;
___; ___; ___; ___; ___
(Circle on listing and on grid)

Seg _ _ _ _ Tr _ _

No. of Res.	Basic Address		Unit address *(location of unit or apartment no.)*	Comments
	House or Bldg. No.	Street Address		
1.	(1)	(2)	(3)	(4)
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

SCHEDULE A
LISTING SHEET FOR SINGLE OR MULTIPLE DWELLING UNIT

2 of _____

Supplement

Seg _ _ _ _ Tr _ _

No. of Res.	Basic Address		Unit address *(location of unit or apartment no.)*	Comments
	House or Bldg. No.	Street Address		
21.	(1)	(2)	(3)	(4)
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
31.				
32.				
33.				
34.				
35.				
36.				
37.				
38.				
39.				
40.				
41.				
42.				
43.				
44.				
45.				
46.				
47.				
48.				
49.				
50.				

MAY - JUNE 1987
RESIDENTIAL TRACT SCREENING

SETUP SHEET

HIGHRISE OR CONDOMINIUM UNITS

COUNTY _____ SEGMENT _____ TRACT _____

Use all mapping materials to locate tract. If possible, drive around the tract to determine boundaries. Complete the grid and listing sheet inside per instructions. Use a separate grid to (1) draw off floor plan and (2) locate building in the tract. After completing the grid and listing sheet, enter the following data:

1. TOTAL NUMBER OF DWELLING UNITS? _____

2. CHECK APPROPRIATE SIZE GROUP EQUAL TO DWELLING UNITS:

SIZE GROUP:	SAMPLING RATE
1 - 3	All _____
4 - 25	4 _____
26 - 50	8 _____
51 - 100	15 _____
101 +	25 _____

3. GO TO TABLE OF RANDOM NUMBERS AND SELECT A STARTING POINT:

4. PERFORM SAMPLING PROCEDURE CALCULATING BELOW:

		SAMPLE UNITS
STARTING POINT	_____	1st interview
SAMPLING RATE (INTERVAL) +	_____	
	_____	2nd interview
(interval) +	_____	
	_____	3rd interview
(interval) +	_____	
	_____	4th interview
(interval) +	_____	
	_____	5th interview
(interval) +	_____	
	_____	6th interview

5. CIRCLE SAMPLE UNITS ON THE LISTING SHEET, THEN COPY ADDRESS TO THE QUESTIONNAIRE.

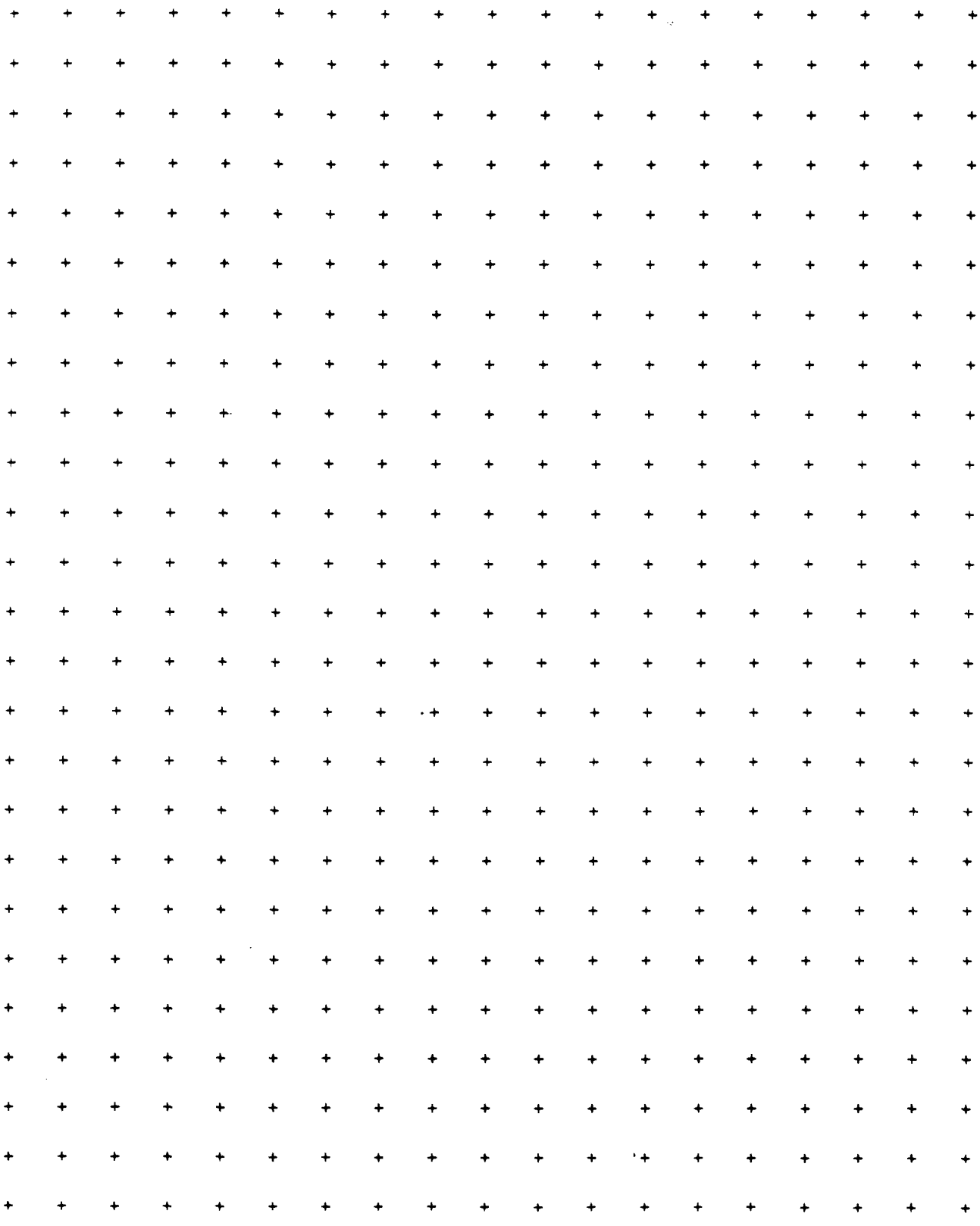
Continue as needed.

Segment _____ Tract _____ Total Dwelling Units _____

GRID (1 of _____)

Sketch tract boundaries and location of residences within the tract. Label roads and other landmarks which form tract boundaries. Identify residences by house number, if available, or in some other consistent manner. Schools, factories, etc., that may be located in the tract should also be sketched.

N



SCHEDULE B
LISTING SHEET FOR HIGHRISE OR CONDOMINIUM

1 of _____

Seg _ _ _ _ Tr _ _ Total Dwelling Units _____

Sample Units ___; ___; ___; ___; ___;
___; ___; ___; ___; ___
(Circle on listing sheet)

Bldg. No.	BASIC ADDRESS Street Address	Comments
City _____ State _____ Zip _____		

No. of Dwell. Units per Floor	Floor No.	Apartment Units per Floor (List Apt. Numbers on line)
	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	
	8.	
	9.	
	10.	
	11.	
	12.	
	13.	
	14.	
	15.	

SCHEDULE B
LISTING SHEET FOR HIGHRISE OR CONDOMINIUM

Seg _ _ _ _ Tr _ _

No. of Dwell. Units per Floor	Floor No.	Apartment Units per Floor (List Apt. Numbers on line)
	21.	
	22.	
	23.	
	24.	
	25.	
	26.	
	27.	
	28.	
	29.	
	30.	
	31.	
	32.	
	33.	
	34.	
	35.	
	36.	
	37.	
	38.	
	39.	
	40.	
	41.	
	42.	
	43.	
	44.	
	45.	

UNITED STATES DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
O.M.B. Number 0535-0089
Expiration Date 5/31/89
C.E. 12-0029a

Residential Tract Screening Form

State	District	Segment	Tract
___ ___	___ ___ ___ ___	0 0 0 0 0 ___ ___ ___	___ ___ 0 0

County _____

Part _____ **of** _____

JUNE 1987
ACREAGE & LIVESTOCK
Enumerative Survey

Hello, my name is *(your name)* with the *(State)* Agricultural Statistics Service.

Your neighborhood has been selected for a nationwide survey of farm or ranch operators beginning June 1 of this year. I am interviewing residents in your area to determine if anyone living in your neighborhood grows crops, raises livestock or poultry or has grain storage facilities at any location anywhere in the State. Your response is voluntary and not required by law.

Telephone Enumerator:
(previously screened tracts)

ITEM 1
Have there been any houses built, moved, torn down or destroyed in your neighborhood since January 1 of this year?

☐ **YES** - *Thank respondent for his or her cooperation and conclude interview.*

☐ **NO** - *Go to page 2, item 2*

Field Enumerator:
(tract not previously screened)

Show respondent aerial photo or sketch. Point out streets, roads, respondents's house and other landmarks. Ask screening questions on pages 2 and 3. Enter names and addresses of farm operators on page 4. Record information for tract in block below.

NON—AGRICULTURAL TRACTS
Line 1 - Tract Description: Type of residences, single or multiple, no. of residences, apartments, trailers, townhouses, etc. **Line 2 - City where located.**
_____
_____

Enumerator _____ **Date** _____

Number of Residences In Tract = 908

Number of Residences to Interview = 909

Survey Code = 817 1

Household	DWELLING UNIT	ITEM 2 Do you operate a farm or ranch or store grain?
1	Name: _____ (first init. last) Address: _____ (rt. box st. apt. #) City, State, Zip: _____ Phone ____ — ____ — ____	___ YES — 1 809 ___ NO — *Continue*
2	Name: _____ (first init. last) Address: _____ (rt. box st. apt. #) City, State, Zip: _____ Phone ____ — ____ — ____	___ YES — 1 809 ___ NO — *Continue*
3	Name: _____ (first init. last) Address: _____ (rt. box st. apt. #) City, State, Zip: _____ Phone ____ — ____ — ____	___ YES — 1 809 ___ NO — *Continue*
4	Name: _____ (first init. last) Address: _____ (rt. box st. apt. #) City, State, Zip: _____ Phone ____ — ____ — ____	___ YES — 1 809 ___ NO — *Continue*
5	Name: _____ (first init. last) Address: _____ (rt. box st. apt. #) City, State, Zip: _____ Phone ____ — ____ — ____	___ YES — 1 809 ___ NO — *Continue*

ITEM 3 Does any other persons living in this house operate a farm or ranch or store grain?	ITEM 4 Does anyone else in your neighborhood operate a farm or ranch or store grain?	Response Code	Tract assigned to farm operator
810 YES - *Record as new household on page 2, enter count of other persons operating a farm. and ranch and continue.* NO - *Continue.*	814 YES - *Record name and address on page 4, enter count of neighbors operating a farm.* NO - *Conclude Interview.*	820 Operator/Manager 1 Spouse 2 Other 3 Refusal 4 Inaccessible 5	822 ___ ___
810 YES - *Record as new household on page 2, enter count of other persons operating a farm. and ranch and continue.* NO - *Continue.*	814 YES - *Record name and address on page 4, enter count of neignbors operating a farm.* NO - *Conclude Interview.*	820 Operator/Manager 1 Spouse 2 Other 3 Refusal 4 Inaccessible 5	822 ___ ___
810 YES - *Record as new household on page 2, enter count of other persons operating a farm. and ranch and continue.* NO - *Continue.*	814 YES - *Record name and address on page 4, enter count of neighbors operating a farm.* NO - *Conclude Interview.*	820 Operator/Manager 1 Spouse 2 Other 3 Refusal 4 Inaccessible 5	822 ___ ___
810 YES - *Record as new household on page 2, enter count of other persons operating a farm. and ranch and continue.* NO - *Continue.*	814 YES - *Record name and address on page 4, enter count of neighbors operating a farm.* NO - *Conclude Interview.*	820 Operator/Manager 1 Spouse 2 Other 3 Refusal 4 Inaccessible 5	822 ___ ___
810 YES - *Record as new household on page 2, enter count of other persons operating a farm. and ranch and continue.* NO - *Continue.*	814 YES - *Record name and address on page 4, enter count of neighbors operating a farm.* NO - *Conclude Interview.*	820 Operator/Manager 1 Spouse 2 Other 3 Refusal 4 Inaccessible 5	822 ___ ___

NEIGHBORS OPERATING A FARM OR RANCH			
Enumerator: Enter Operators Name, Address and Telephone Number	Is operator located within segment boundaries?	List households which identified this operation	Tract assigned to farm operator
Name: ____ (first, init., last) Address: ____ (rt., box, st., apt.#) City, State, Zip: ____ Phone: ____ — ____ — ____	YES ___ NO ___	____ ____ ____ ____ ____	823 ___ ___
Name: ____ (first, init., last) Address: ____ (rt., box, st., apt.#) City, State, Zip: ____ Phone: ____ — ____ — ____	YES ___ NO ___	____ ____ ____ ____ ____	823 ___ ___
Name: ____ (first, init., last) Address: ____ (rt., box, st., apt.#) City, State, Zip: ____ Phone: ____ — ____ — ____	YES ___ NO ___	____ ____ ____ ____ ____	823 ___ ___
Name: ____ (first, init., last) Address: ____ (rt., box, st., apt.#) City, State, Zip: ____ Phone: ____ — ____ — ____	YES ___ NO ___	____ ____ ____ ____ ____	823 ___ ___
Name: ____ (first, init., last) Address: ____ (rt., box, st., apt.#) City, State, Zip: ____ Phone: ____ — ____ — ____	YES ___ NO ___	____ ____ ____ ____ ____	823 ___ ___